Date: Thu, 10 Jun 93 17:06:37 PDT
From: Packet-Radio Mailing List and Newsgroup <packet-radio@ucsd.edu>
Errors-To: Packet-Radio-Errors@UCSD.Edu
Reply-To: Packet-Radio@UCSD.Edu
Precedence: Bulk
Subject: Packet-Radio Digest V93 #162
To: packet-radio

Packet-Radio Digest   Thu, 10 Jun 93   Volume 93 : Issue 162

Today's Topics:

- DCD mod for PK232
- internet->packet email gateway? (2 msgs)
- MiniSport Laptop Hacker - Vol 1
- MiniSport Laptop Hacker - Vol 2
- MiniSport Laptop Hacker - Vol 3
- MiniSport Laptop Hacker notes (2 msgs)
- PK-232 DCD open squelch mod wanted
- Send mail to School
- Soundblaster as modem?
- TNC question
- TNC Wanted
- Using NOS 2.0m TCP/IP package

Send Replies or notes for publication to: <Packet-Radio@UCSD.Edu>
Send subscription requests to: <Packet-Radio-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Packet-Radio Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/packet-radio".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 9 Jun 93 23:23:46 GMT
From: news-mail-gateway@ucsd.edu
Subject: DCD mod for PK232
To: packet-radio@ucsd.edu

n4tii%kd4nc.uucp@gatech.edu (John Reed) writes:

>I am looking for the DCD open squelch mod for the PK-232.
>
>One, does the mod exist? Two, is it real hard to install?

TAPR has a state machine DCD mod with will work with the PK-232. There is also a PK232 Modem Disconnect kit, which is designed for adding an external modem, but also has the necessary connection for the state machine, which makes it very easy to install.

For more information, send a message to "file-request@tapr.org" with the commands (on separate lines):

```
HELP
GET /PUB/TAPR/TAPRKITS.TXT
QUIT
```

and more information will be sent to you. Or you can contact:

Tucson Amateur Packet Radio
P.O. Box 12925
Tucson, AZ 85732-2925

or call 602-749-9479 between 10am and 3pm MST, Tuesday through Friday.
Or FAX 602-749-5636 (anytime).

73, Bob

```
------------------
Bob Nielsen, W6SWE      Internet: w6swe@tapr.org
Tucson, AZ              Amateur IP: 44.124.12.16
                   AX.25: w6swe@wb7tls.az.usa.na
```

Date: 10 Jun 93 02:46:01 GMT
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!darwin.sura.net!sgiblab!rtech!ingres!jpk@network.UCSD.EDU
Subject: internet->packet email gateway?
To: packet-radio@ucsd.edu

Is there a gateway that forwards email between the Internet and packet radio? If so, what's the mail address syntax? Thanks.

-- Jon

--
Jon Krueger jpk@ingres.com

Date: Thu, 10 Jun 1993 13:53:00 GMT

From: csus.edu!netcom.com!n6wbl@decwrl.dec.com
Subject: internet->packet email gateway?
To: packet-radio@ucsd.edu

Jon Krueger (jpk@Ingres.COM) wrote:
: Is there a gateway that forwards email between the Internet and
: packet radio? If so, what's the mail address syntax? Thanks.

Here's one I saw earlier:

How to Use the WB7TPY Packet <-> Internet Gateway

First, some brief operational notes:

(1) Messages must not contain any foul language, or commercial purpose.
(2) Messages can only be sent to countries that the United States has a third-party agreement. All others will be destroyed.
(3) Messages from the internet should be less then 5K in length. No files should be sent.
(4) If you have questions, please do not hesitate to contact me either on
packet radio: WB7TPY@WB7TPY.AZ.USA.NA   -or-
Internet   : david@stat.com   -or-
Fidonet   : David Dodell @ 1:114/15

(5) Have fun. Use the gateway as much as you like. That is what it is there for.

From Internet to Packet

Send mail to the internet address of:

gate@wb7tpy.ampr.org

The first line of text must contain a full packet address, preceded with the word "Packet:"

For example, mail to my packet address, would have the first line of text;

Packet: wb7tpy@wb7tpy.az.usa.na

From Packet to Internet

Send as private mail (never a bulletin) to the packet address of:

gate@wb7tpy.az.usa.na

The first line of text must contain a full domained internet address, proceeded with the word "Internet:"

For example, mail to my internet address, would have the first line of text;

Internet: david@stat.com

73's De Jason Turning N6WBL
Internet : jturning@netcom.com
AX.25 Packet: N6WBL@KD6XZ.#NOCAL.CA.USA.NA
AmprNet : n6wbl%n6wbl@sosac (44.2.0.64)

Date: 10 Jun 93 03:18:29 GMT
From: olivea!isc-br!tau-ceti!comtch!opus-ovh!bmork@ames.arpa
Subject: MiniSport Laptop Hacker - Vol 1
To: packet-radio@ucsd.edu

MiniSport Laptop Hacker - Vol 1

As some of you may know, Zenith has gotten out of the business of selling personal computers. I had the good fortune to purchase some of their extremely small MiniSport laptop computers. They are absolutely perfect for packet use and in any RACES or ARES setup, they could provide other functions as backups due to their universal hardware platform. I thought others might be interested in information I've collected in case you're using one or interested in buying one.

If *you* have information, please pass it on to me. I'll bundle it up and send out a MiniSport Laptop Hacker Part 2!

These computers are basically an IBM/PC platform with 1 or 2 Mbytes of RAM, MSDOS 3.3 in ROM, a 2" floppy, and a 25x80 column LCD screen. RAM above 640k can be used for EMS or battery backed RamDrive. They have connections for an external CGA monitor, an external floppy, serial port(s), and a parallel port. Primary connection to other computers is via a 3-wire or 7-wire (faster baud rates) null-modem cable. FastWireLink program is included in ROM with MSDOS, logically on drive C:

The 2" disks are hard to locate, but I finally found a source for them, albeit an expensive and un-friendly one: Rex Television Service Co., phone 708-448-5558.

I had a power supply problem with one. I unscrewed the case and innards of the offending unit and learned a lot. The interior is modular and easy to work on: Power supply, Main CPU board, Keyboard, Disk Drive, and LCD display. Multiconductor ribbons connect the parts. If you open yours up and slide the main PC board out, be carefull of the POWER SWITCH and the disk drive EJECT BUTTON. Both get caught easy on the case and might snap something. The only tricky part is that one of the drive mounting screws needs to be unscrewed before you can release a thin piece of copper ("Mu metal") colored grounding strap wrapped up and around the main PC board from below.

Like I said, I had a power supply problem with one. To the best of my knowledge, it's an intermittent cable contact. Each time it fails, unconnecting & reconnecting the one PS cable fixes the problem. It's a 15 min operation and is not complicated. I'm thinking of swapping power supplies around. I have the pinout of the PS connection to the main board, if you're interested. You could test the PS by only taking off the bottom computer panel and measuring voltages from the "underside" of the circuit board.

The unit is powered by a removable battery that reminds me of a cam-corder battery. It's advertised to be 6v. I suspect it's five NiCd cells (5x1.2 => 6.0). The computers power supply/ charging receptacle is on the battery pack and feeds connections further into the computer. I've tapped into the wierd shaped connector with paper clips. Alternately one could bypassed the battery entirely by clipping alligator clips onto the sliding contacts on the computer. The batteries will charge with a 6volt supply, but the computer runs from 9volts DC if it's not using batteries.

As I hinted above, a second serial port is available. It's logically there, but terminates mechanically in a Scotch-Flex type socket. It's meant to accept a modem module. I'm currently trying to determine a pinout for this connector. If you have the information already, perhaps you could pass it on to me.

The external floppy drive connector has been as difficult to find as the 2" floppy disks. It is a square outer connector, with a female D-shaped receptacle. The D-shaped receptacle has 20 pins. It's just under 3/16" tall and just under 5/8" wide (at the wider side of the D). If you have any PINOUT OR ACQUISITION INFORMATION for this type of connector, please send me a message and I'll include the information in round 2 of the MiniSport Laptop Hacker.

73, Brian, ka9snf @wb7nnf.#spokn.wa.usa

Brian Mork   Internet bmork@opus-ovh.spk.wa.us
 . . . .   Amateur Radio ka9snf@wb7nnf.#spokn.wa.usa
.. . ..   USMail 6006-B Eaker, Fairchild, WA 99011

Date: 10 Jun 93 03:17:18 GMT
From: olivea!isc-br!tau-ceti!comtch!opus-ovh!bmork@ames.arpa
Subject: MiniSport Laptop Hacker - Vol 2
To: packet-radio@ucsd.edu

MiniSport Laptop Hacker - Vol 2

Remember to send me any hacker tips, resources, addresses, etc that you have so I can include them in subsequent MLH volumes. One correction from Volume 1 has been pointed out to me. The MiniSport is an IBM/XT compatible, not an IBM/PC compatible

I. MAXIMIZING BOOTUP CONVENIENCE AND MINIMIZING BOOTUP DISK SPACE

The bootup sequence on this computer is a little different than you're probably used to. Most MS-DOS computers will boot up on hard drive C:, looking for the CONFIG.SYS and AUTOEXEC.BAT files in the C: root directory. If the CONFIG.SYS isn't there, nothing special happens. If the AUTOEXEC.BAT isn't there, you will be prompted for a time and date entry.

The first, biggest difference on the MiniSport, is that you can choose your boot device. Normal MSDOS always tries the first floppy, then goes to hard disk. With the MiniSport, you can choose to boot from 2" floppy disk, the internal ROM disk C:, the external floppy disk plugged in the back, or ROM disk D:. Lots of choices!

The least used is probably booting from an external drive. I know where they are available for about $125, but this price is higher than the street price of the entire computer, so not many people have them. Booting from the built in 2" disk is similar, and more economical, since these disks are available for $4-$6 each. With either selection, the disk must be formatted and prepared with the MSDOS SYS.COM utility.

Booting from RAM disk D: gives you some flexibility. You can create and store CONFIG.SYS and AUTOEXEC.BAT files in the root directory of D:, and they'll be used during bootup. If AUTOEXEC.BAT is not there, you will be asked for date and time. The situation involving CONFIG.SYS is a little bit more complicated, however. If you boot from D:, the boot routine will look for a command processor (COMMAND.COM or one of your choice) on disk D:. It's kind of disappointing to have to keep a copy on disk D:, since there's one permanently available in ROM on disk C:. To use the one over on C:, the non-boot disk, you need to include a SHELL command in CONFIG.SYS. It might look like this:

```
   SHELL = C:\COMMAND.COM /P
```

The "P" option tells it to stay permanently in memory; the MSDOS command EXIT will not exit from the command processor. This gave me some trouble because the COMPSEC variable (type SET at the DOS command line to see all variables) was not getting properly set. This may be a bug in the MiniSport firmware. Does anyone else notice that when booting on C: or D:, specifying or not specifying a command processor with SHELL, COMPSEC doesn't get set correctly?

My preference is to boot from ROM disk C:. The unpredictable part is that when booting from C:, AUTOEXEC.BAT and CONFIG.SYS from disk D: are used. In this case, no SHELL command is required (hence no CONFIG.SYS file unless you need it for other reasons) since COMMAND.COM is already available on the default boot disk. The only line "necessary" in the AUTOEXEC.BAT file is "d:" to switch over to disk d: for the first command line. Even that is only necessary if you *want* to be over on disk D:

Personally, I use no CONFIG.SYS and the following AUTOEXEC.BAT on D:

```
   @echo off
   echo BjM (Opus-OVH) P autoexec.bat
   path c:\;d:\util;d:\
   prompt $p$g
   verify on
   d:
```

Let me know what parts of the MLH series are useful to you. Pass on your hints and pointers so others can benefit.

73, Brian, ka9snf@wb7nnf.#spokn.wa.usa or Internet ka9snf@jupiter.spk.wa.us

```
---
Brian Mork   Internet bmork@opus-ovh.spk.wa.us
 .  .  .  .   Amateur Radio ka9snf@wb7nnf.#spokn.wa.usa
..  . ..     USMail 6006-B Eaker, Fairchild, WA 99011
```

Date: 10 Jun 93 03:16:18 GMT
From: olivea!isc-br!tau-ceti!comtch!opus-ovh!bmork@ames.arpa
Subject: MiniSport Laptop Hacker - Vol 3
To: packet-radio@ucsd.edu

MiniSport Laptop Hacker - Vol 3   19 Nov 1992

Thanks for all the feedback! I heard from W4NQB, N2BQF, W6QJM, NI9X, N2PBU, N9LNO and KB1UM. Several comments indicated that the discussion of COMPSEC, boot drives, etc was too complicated or too confusing. I'll give a clearer, more concise rendition in the next volume.

In this issue, two topics are covered:

1. Building your own null modem FWL (FastWire Link) cable.
2. Discussion of "extra" DOS files Zenith put on your disk C:

1)
If you have a MiniSport, you *need* a null modem cable to make the computer useful. You can purchase a null cable for about $10, but if you're a ham, you probably have parts to make your own. A cable with *three* terminating plugs adds tremendously to the convenience of hooking up to unknown "host" computers you may run across. The following diagram shows the way I wired one that has worked for me:

```
   9-pin fem --------- 4' ---------- 9-pin fem --- 4" --- 25-pin male
      2                                 3                    2
      3                                 2                    3
      5                                 5                    7
```

Hook the lone 9-pin into your MiniSport serial port and then use either a 9-pin or the 25-pin connector on the other with the host MSDOS serial port. Of course, the host could just be another MiniSport.
FWL will work successfully with this three-wire cable. The on-line help indicates that a full 9-wire null modem will allow faster transfer due to hardware handshaking. FWL checks and brings up the transfer speed to the maximum possible. This 3-wire cable is sufficient, however.

2)
I believe the following to be a complete list of extra "Zenith special" programs that are resident on your ROM drive C:. If you've never looked at this list before, you're probably missing some fun! I have no manuals for any of this. The comments I'm making are from experimentation only. If you have manuals, copy this list, make corrections to my comments and send it back to me!

APPLY.COM - Repetitive DOS commands by typing on the changing part.
BOOTF.COM - Lets you reboot the system from floppy.
EMM.SYS - Expanded Memory Manager (I use all mine as a drive, however)
FWL.EXE & FWL.HLP - FastWire Link to transfer to and from another computer. * Caution * Don't port FWL over to a computer that has a disk partition beyond the original 32 MByte MSDOS limit. I did this and succeeded in scrambling the directory when that computer received files. The only safe way to transfer to a 32 MByte+ formatted

machine is to use only floppies for the transfer, and then do a local copy from floppy to hard drive.
GDU.EXE & GDUTSR.COM - General Disk Utilities. They work on other machines, but I have not figured out how to use the TSR version.
MACHINE.COM - This lets you make "post bootup" changes that otherwise would have to be made with the SETUP utility prior to boot.
NOSTACK.COM - I'm not sure what this does. Any comments?
SEARCH.COM - A global (all directory) search for a filename.
ZCACHE.SYS - A disk cache program. Has anybody ported this to other machines?
ZDIR.SYS - A complete, but compact directory (dual columns). Port works.
ZSPOOL.COM - A printer spooler. So how is this so much better than the old fashioned MSDOS PRINT utility?

And these are the MSDOS 3.3 files you *don't* have:
EGA.CPI
FASTOPEN.EXE
FDISK.COM
GWBASIC.EXE
RAMDRIVE.SYS
SHARE.EXE

I recently succeeded in unsoldering the 1 Mbyte SIPP from one computer and grafting it into a second. More info on that, squeezing a lot into a 2 MB ramdrive, and a clearer description of minimum boot files -- in Volume 4.

73, Brian, ka9snf@wb7nnf.#spokn.wa or Internet ka9snf@jupiter.spk.wa.us

---
```
Brian Mork   Internet bmork@opus-ovh.spk.wa.us
 .  .  .  .   Amateur Radio ka9snf@wb7nnf.#spokn.wa.usa
..  . ..     USMail 6006-B Eaker, Fairchild, WA 99011
```

Date: Thu, 10 Jun 1993 18:11:36 GMT
From: agate!howland.reston.ans.net!math.ohio-state.edu!sol.ctr.columbia.edu!hamblin.math.byu.edu!news.byu.edu!news.mtholyoke.edu!eddie.mit.edu!news.intercon.com!psinntp!megatest!mithril!alung@
Subject: MiniSport Laptop Hacker notes
To: packet-radio@ucsd.edu

Hey, these are *great*! Unfortunately, I have a Turbosport 386e.
Are there Laptop Hacker notes for this model somewhere?

aaron

alung@megatest.com

Date: Thu, 10 Jun 1993 21:41:10 GMT
From: usc!cs.utexas.edu!utnut!torn!nott!cunews!freenet.carleton.ca!
Freenet.carleton.ca!aa963@network.UCSD.EDU
Subject: MiniSport Laptop Hacker notes
To: packet-radio@ucsd.edu

In a previous article, alung@megatest.com (Aaron Lung) says:

```
>Hey, these are *great*!  Unfortunately, I have a Turbosport 386e.
>Are there Laptop Hacker notes for this model somewhere?
>
>aaron
>alung@megatest.com
>
```

I've got the SuperSport 286 that I use for my PC working into a
MFJ1270. Find all these very interesting and looking for more.

```
--
 /-\0 /-() ___      '86 Virago 1100 ---- My Stallion... DoD # - 814
 \_/ \\/ ) __ __    aa963@freenet.carleton.ca | carr@uranus.dgrc.doc.ca
      |/_\  ___  __ ve3fhc@ve3osq#eon.on.can.na
       \_/ .  .  .. Lloyd Carr  ---  Munster  ON
```

Date: 10 Jun 93 14:17:44 GMT
From: concert!news-feed-1.peachnet.edu!emory!sol.ctr.columbia.edu!news.kei.com!ub!
dsinc!wells!beyonet!steve@decwrl.dec.com
Subject: PK-232 DCD open squelch mod wanted
To: packet-radio@ucsd.edu

I use my pk-88s with the squelch open all the time without a DCD mod. You have to set the volume just right so the DCD light will blink on and off from the hash noise with the squelch off. I use this technique with the tncs in KISS mode. Works great!

I can now decode packets that had short delays where as I couldn't before with the squelch up.

Steve

```
--
|Stephen Urich|        Internet:steve@zero.com         |"Cattle mutilations |
|NIC: SU2     |        UUCP:uunet!beyonet!steve        |are up!" --Sneakers |
|ARS: WB3FTP  | Packet:WB3FTP@WB3FTP.#EPA.PA.USA.NOAM  |ax25<->PBBS<->IPGATE|
|Bensalem, PA |Radio:wb3ftp@wb3ftp.ampr.org[44.80.8.44]|TCP/IP-FTP-SMTP-UNIX|
```

Date: 10 Jun 93 20:53:31 GMT
From: news-mail-gateway@ucsd.edu
Subject: Send mail to School
To: packet-radio@ucsd.edu

Hi,

I have set up a temporary tcp/ip station at Muir Elementary School in Antioch California. The initial purpose of it was to allow the students to mail a letter to the President via E-Mail. Thinking, I though it might me neat for them to receive mail from around the world. So, if you have a free moment, and feel inclined to do so, please send a short note to:

room16@school.cncr1714.pacbell.com

This will be forwarded over Packet Radio 145.75 to the school.

The station will be taken down Friday, June 18th.
Thank You,
--
R.W. Hughes (Bob, Bones)
rwhughe@pacbell.com (InterNet)
wb6cgh@concord (AmprNet)

Date: Thu, 10 Jun 1993 17:31:48 GMT
From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!
europa.eng.gtefsd.com!eddie.mit.edu!news.intercon.com!psinntp!laidbak!tellab5!
jwa@network.UCSD.EDU
Subject: Soundblaster as modem?
To: packet-radio@ucsd.edu

In Article: 4857 of rec.radio.amateur.packet
wkt@csadfa.cs.adfa.oz.au (Warren Toomey) writes,

At a packet meeting last night, an amateur suggested writing an AX.25 packet driver for a soundblaster card to do 1200, 4800 and/or 9600 baud. This sounds like an excellent idea: no TNC, no modem, just plug the rig into the soundblaster.

Has anybody thought of this before? Is it plausible? etc etc.

Cheers,
     Warren vk1xwt

A company called Willco Electronics has a DSP card called the "Ham Blaster" that can run modems and interface to Packet TNC's and software like Baycom, for example. Their address is

Willco Electronics
P.O. Box 788
New Lenox, IL
60551

```
   Jack Albert               Fellow Radio Buff
                    Tele (708) 512-7854
   Tellabs, Inc.             FAX  (708) 852-7346
   4951 Indiana Ave.         jwa@tellabs.com
   Lisle, IL
   60532
```

Date: 10 Jun 1993 13:17:24 GMT
From: olivea!inews!ilx018.intel.com!ilx049!dbraun@decwrl.dec.com
Subject: TNC question
To: packet-radio@ucsd.edu

I have a Kantronics UTU-X/P HF TNC that I bought a few years ago at a hamfest for next to nothing. I bought it for RTTY listening (watching?), and it works fine for that. Now I am interested in VHF packet, and I am wondering if it is possible to upgrade this unit to 1200 baud for VHF use. Could an EPROM change do this, or is the 300 baud modem circuitry (really a couple of software-programmable switched-cap filter chips) fundamentally incapable of working at 1200 baud?

If I really should spring for a real VHF TNC, could someone tell me what units to look for or avoid? It would be nice to have KISS mode for TCP-IP, but I really want to spend as little money as possible. Since I already have the HF unit for RTTY, morse, etc, I don't need to pay for these features a second time.

Is there a FAQ for packet? All I know is what I read in the ARRL Operating Guide (which is a very handy book!).

Thanx,

--
Doug Braun (N1OWU)

Email: dbraun@iil.intel.com
Intel Mail: IDC1-41
iNet: 8-435-5069 Long Distance: 011-972-4-355069
Fax: 8-435-5999 Long Distance: 011-972-4-355999
Snail Mail: US: Other:

US:
PO Box 311
Mendham, NJ 07945

Other:
Intel Israel, Ltd.
IDC1-41
Matam Scientific Center
Haifa, Israel 31015

"There is no human problem which could not be solved if
people would simply do as I advise." -- Gore Vidal

Date: 10 Jun 93 11:33:15
From: pravda.sdsc.edu!news.cerf.net!usc!math.ohio-state.edu!sol.ctr.columbia.edu!hamblin.math.byu.edu!hamblin.math.byu.edu!emery@network.UCSD.EDU
Subject: TNC Wanted
To: packet-radio@ucsd.edu

I am looking for a TNC to use on VHF packet. The two important features that it have are KISS mode and a low price. If you have something for sale send me e-mail at emery@bert.cs.byu.edu

Thanks,

Emery (KB7TER)

Date: Thu, 10 Jun 1993 21:01:16 GMT
From: netcon!news@locus.ucla.edu
Subject: Using NOS 2.0m TCP/IP package

To: packet-radio@ucsd.edu

I am in need of guidance in the proper setup of my packet station for
NOS version 2.0m.
So far I have been able to set up the statio, get my ip number, ping
other stations, connect to other stations as long as I provide the
IP address number.
What I need help with is setting up the domain files, the ftp user files,
and the mail forwarding parameters so that the system will "automagically"
look up the correct station, forward mail, ect....
I you have any example files, and where in the /nos directory structure
they go, please email me at the above address.. Thanks and 73's

----

Date: Thu, 10 Jun 1993 22:30:14 GMT
From: usc!sol.ctr.columbia.edu!phlim.ph.kcl.ac.uk!sjg@network.UCSD.EDU
To: packet-radio@ucsd.edu

References <C8F3Ho.A7K@megatest.com>, <iLPw5B6w165w@opus-ovh.spk.wa.us>,
<C8FDKn.1oq@freenet.carleton.ca>
Subject : FAQ

Come on people, is there an FAQ or not...

(8 hours isn't a long time on usenet I know, but here I was all
excited at taking home an answer today ....)

Simon. (hoping for an answer in the near(ish) future)....
--

End of Packet-Radio Digest V93 #162
****